

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
9 June 2005 (09.06.2005)

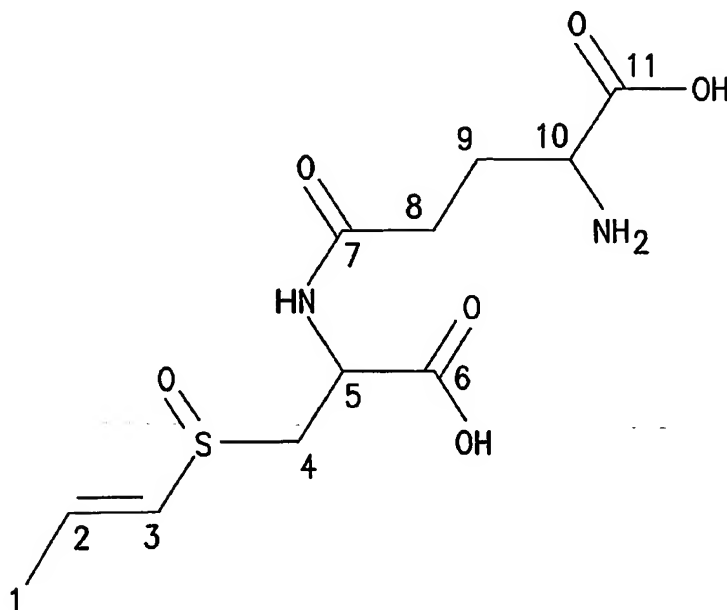
PCT

(10) International Publication Number  
**WO 2005/051409 A1**

- (51) International Patent Classification<sup>7</sup>: **A61K 38/04**, 38/05
- (21) International Application Number: PCT/EP2004/013413
- (22) International Filing Date: 25 November 2004 (25.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0327527.8 26 November 2003 (26.11.2003) GB  
60/624,446 2 November 2004 (02.11.2004) US
- (71) Applicant (for all designated States except US): UNIVERSITÄT BERN [CH/CH]; Hochschulstrasse 4, CH-3012 Bern (CH).
- (72) Inventors; and  
(75) Inventors/Applicants (for US only): MÜHLBAUER, Roman, Conrad [CH/CH]; Stollen 85A, CH-3255 Rapperswil (CH). WETLI, Herbert [CH/CH]; Schützenmattstr. 61, 4051 Basel (CH).
- (74) Agent: GRUBB, Philip; Novartis AG, Corporate Intellectual Property, CH-4002 Basel (CH).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: PLANT EXTRACTS FOR THE TREATMENT OF INCREASED BONE RESORPTION



(57) Abstract: The present invention concerns the use of  $\gamma$ -glutamyl-peptide, for example  $\gamma$ -L- glutamyltrans-S-1-propenyl-L-cysteine sulfoxide, in the treatment or prevention of diseases or conditions which are characterized by increased bone resorption, such as Paget's disease, tumor-induced bone disease or osteoporosis, inhibits dose-dependently the resorption activity of osteoclasts, the minimal effective dose being about 2 mM.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*